

**UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF PENNSYLVANIA**

**United States of America,**

**v.**

**Yu Xue,**

**Defendant.**

**Case No. 2:16-cr-00022-JHS**

**DEFENDANT'S SENTENCING MEMORANDUM IN SUPPORT OF  
NON-CUSTODIAL SENTENCE**

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Dr. Yu Xue (“Dr. Xue”), by and through the undersigned counsel, respectfully submits this memorandum in aid of sentencing and requests a non-custodial sentence based on the downward departure and/or variance warranted in this case.

## **I. INTRODUCTION**

Dr. Xue — a mother of two, a wife, and, from 2006 to January 2016, a scientist at GSK — has pled guilty, pre-indictment, to one count of Conspiracy to Steal Trade Secrets, in violation of 18 U.S.C. § 1832(a)(5). Dr. Xue takes full responsibility for her conduct: between 2012 and 2015, she sent a series of GSK documents — some of which contained trade secrets — to Tao Li and her other co-defendants, knowing that doing so not only breached the trust of her employer; it was illegal. While Dr. Xue did not appreciate at the time that these documents in fact contained GSK trade secrets<sup>1</sup>, she did know that the information was confidential and proprietary to GSK and that the information should not be shared outside the company. Although the documents she sent to Dr. Li and others were, for the most part, never even opened or accessed, much less utilized, sending them as Dr. Xue did violated the law and, for that, Dr. Xue must face the consequences for her conduct.

The factors that make this case truly unique are what make a sentence of probation or home confinement entirely fair and just. It is hard to imagine a scenario where a defendant commits conspiracy to steal trade secrets and i) does not intend to cause a pecuniary harm to the victim; ii) the victim suffers no actual harm; and iii) the defendant does not benefit financially. But that is this case here: Dr. Xue took documents from GSK that contained largely publicly

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<sup>1</sup> As the Court noted in its September 22, 2020 Order on loss amount: “To violate 18 U.S.C. Sec. 1832(a), a defendant need not know that the stolen information met the legal definition of a trade secret. Instead, all that is required is that a defendant knew the trade secret was ‘confidential information to which he had no claim.’” ECF 313 at 8 n.8.

available information with scattered trade secrets contained within.<sup>2</sup> GSK was never deprived of any of its intellectual property and Dr. Xue and her coconspirators never made use of any of the pilfered trade secrets. Indeed, the vast majority of the documents were never even viewed by Dr. Xue's coconspirators. Instead, the documents resided, unviewed and unused, on Tao Li's laptop. And if there were the slightest doubt that Dr. Xue meant no harm to GSK, that doubt is erased by the fact that Dr. Xue had access to vast troves of incredibly valuable GSK trade secrets involving entire recipes for drugs and processes that were not yet patented. She never accessed or stole any of these immensely valuable documents because her intent was not to harm GSK or to monetize anything that she removed from GSK.

A non-custodial sentence in this case involving probation or home confinement would recognize both that Dr. Xue never benefited from her conduct and she did not intend to harm GSK—and, in fact, no harm was suffered—and also that her plea of guilt has already carried an enormous cost for her and her family. As Dr. Xue's letter (*see* Ex. A) to the Court makes clear, Dr. Xue recognizes that she has gone from being a widely-respected scientist with a decades' long career ahead of her to being a convicted felon because of decisions that she alone made. Regardless of the sentence the Court ultimately decides upon, the life that Dr. Xue formerly led as a highly-respected scientist is now long gone. And the financial impact of this case simply cannot be overstated; her family has been devastated financially as decades' worth of accumulated savings have been wiped out.

The Court is already familiar with many of the critical facts of this case by virtue of the three-day evidentiary hearing conducted in April 2019. Nevertheless, a brief overview of some

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<sup>2</sup> As Dr. Field testified at the loss amount hearing, to the extent that any information in the GSK documents was trade secrets, it was fragmented and akin to having a single puzzle piece in a 1000 piece jigsaw puzzle — the information was useless to a person trying to replicate GSK's work product. 5/2/2019 Hr'g Tr. 85:11–86:19.

of the most salient facts regarding this offense that the Court should consider before sentencing Dr. Xue is in order. And, of course, the Court must consider the entirety of Dr. Xue's life—who she is as a person: a mother, a wife, a friend and a member of her community. These factors, taken together—and, in particular Dr. Xue's extraordinary and selfless volunteer work in teaching math and science to children in her community—make her worthy of a non-custodial sentence of probation or, alternatively, home confinement, which would be sufficient, but not greater than necessary, to satisfy the sentencing factors set forth in § 3553(a). *See Kimbrough v. United States*, 552 U.S. 85, 101 (2007) (noting that the objective in sentencing is that it be “sufficient, but not greater than necessary” to meet the ends of justice).

**A. Dr. Xue's Early Life and Education**

Dr. Xue was born in 1970 in Beijing, China. Her parents were both scientists and chemists and, from a very early age, Dr. Xue knew that she would follow in their footsteps. From the time that she was a small child, science has consumed her life. Some of Dr. Xue's earliest memories are from spending time in the chemistry labs of her parents. She would watch them carefully conduct research and experiments and ask questions. She explored their laboratories and even made it a habit to study the scientific posters on the walls. By the age of five she had learned much of the periodic table, simply through constant exposure.

Dr. Xue was a math prodigy. While still in the first grade, Dr. Xue competed in a math competition against students of all grade levels at her local elementary school and ended up winning first prize despite competing with students of all ages.

In high school, Dr. Xue ranked at the top of her class and received awards in Olympiads for mathematics, chemistry and biology. She frequently attended various academic competitions. Dr. Xue enjoyed helping other students in her high school to study mathematics and science to

prepare for their finals. Even in high school, Dr. Xue was passionate about teaching others and sharing her knowledge.

Dr. Xue received her undergraduate degree in molecular biology. It was then that she fell in love with the process of conducting research and was determined to continue pursuing her scientific interests.

Dr. Xue continued to study biology and biochemistry in graduate school at Peking University from 1993 to 1996. During the summer after her first year in graduate school, Dr. Xue was asked to take two American professors visiting China to visit Beijing. After a visit through China's Summer Palace, Great Wall, and Forbidden City, the American professors suggested that she pursue a PhD in a program in the U.S. after she graduated from Peking University, an idea that excited Dr. Xue.

Dr. Xue applied to U.S. schools and after receiving multiple offers, accepted an offer at the University of North Carolina in Chapel Hill, which provided teaching and research fellowships. After early trepidation that the work would be overwhelming, Dr. Xue excelled at Chapel Hill. One of the reasons for Dr. Xue's success was her remarkable work ethic—she was able to study for hours on end without a break, and could devour as many as five text books in a single week. Dr. Xue obtained her PhD in 2000.

Dr. Xue spent the next six years in Chapel Hill, doing research, completing her post-doctoral training and publishing papers. This work led to collaborations with scientists from GSK and, in 2006, an offer to move to King of Prussia, Pennsylvania, to work as a senior scientist at GSK.

## **B. Dr. Xue's Family Life**

In 2001, Dr. Xue married her husband, Yudong, who was a physics major at Chapel Hill at the same time Dr. Xue was there. Her marriage has been strong and loving, and Yudong has remained incredibly supportive the past five years while this case was being prosecuted.

Dr. Xue's son, Ethan, was born in 2004, and he is now a junior in high school. Inspired by his mother's example, Ethan has shown great passion and aptitude for mathematics. Last year he won first place in MathCounts in Pennsylvania and represented Pennsylvania for the national MathCounts competition in 2019. Ethan was recently offered an internship at Caltech for next summer in the physics and math program. Remarkably, Ethan is also a nationally ranked squash player and a talented cellist in his local orchestra as well.

A daughter, Eden, was born in 2008. Eden is also a multi-talented child, excelling as an artist and a swimmer. She also plays piano and has performed at Carnegie Hall.

## **C. Dr. Xue's Early Career at GSK**

At GSK, Dr. Xue's department focused largely on finding new small molecule drugs which interact with target proteins. In 2008, because of her expertise with structure-based design, she moved to Biopharm Novel Target BDU (Biopharm discover unit) under the leadership of John White and Alex Taylor. Once again, she thrived. Dr. Xue loved the work and was very good at her job. Dr. Xue helped GSK develop the most advanced method of protein design and humanization for monoclonal AntiBodies (mAB) and helped design three mAB (anti-HER3, anti-IL7 receptor, and anti-IL7 ligand); all three were patented under GSK's name, and Dr. Xue was promoted to manager due to her success.

Unfortunately there was a reorganization at GSK at the end of 2011 and the Novel Target BDU project was dissolved. As a result, Dr. Xue could not find a protein engineering role within



GSK and was forced to move to the Biopharm development group. However, development departments and discovery departments were very different. In the development department, scientific creativity was not the focus and Dr. Xue could not use much of her scientific talent in the new department. Instead, the development office required communication skills and soft skills rather than hard science. Although Dr. Xue liked the development job, her talents and true enjoyment came from the process by which new drugs were discovered and designed. As a result, she felt that her talents were not being fully utilized.

#### **D. Dr. Xue and RenoPharma**

It was during this time, in 2011, that Dr. Xue was approached by Lucy Xi, Yan Mei and a GSK patent attorney who discussed with her the idea of setting up a new research pharma company in China. Dr. Xue was interested and discussions ensued. The GSK attorney took an active role in the discussions of how to run a company and find investors. He initially planned that they focus on protein engineering (antibody humanization and affinity maturation) for other companies and thus make money from the research. The original plan was aborted when the attorney decided to move to California in May 2012.

That same year, Dr. Xue became reacquainted with Tao Li, a friend and fellow student from Chapel Hill. Dr. Li had been interested in the idea of starting up his own company one day and he and Dr. Xue discussed starting a company together. Soon their discussions included Yan Mei and Lucy Liu. The original plan was drafted by Yan Mei in 2012, albeit with input from Dr. Xue, and it was Dr. Mei who registered Renopharma in Delaware. It was proposed that Dr. Xue would receive 30 percent of the shares and that she would act as the scientific consultant for the company. Dr. Xue was excited that she might be able to again use her knowledge as a protein engineer to design new drugs.

The company could barely get started, though, because it was unable to get sufficient funding other than a small amount of seed money from some personal friends. No money was available for salaries for anyone. Because of the lack of funding for the new company, Dr. Xue could not do any research and shelved plans for quitting her job at GSK—which she had planned to do if the new company could become viable. In the end, Dr. Xue’s contribution to Renopharma amounted to helping them identify targets in 2013 and, in 2014 and 2015, doing some data analysis when needed. Most of the documents at issue were sent in 2012, almost nine years ago.

**E. The Offense Conduct**

In the typical theft of trade secret case, the perpetrator’s goal is to steal the intellectual property of his or her victim and then monetize that property by using it commercially and thereby steal market share from the victim.

This case was anything but typical. Dr. Xue did not use the documents she took from GSK to make a competing product; indeed, the vast majority of documents she shared with her coconspirators were never even seen by them much less used to make a product that competed with GSK. Although Dr. Xue understood that these documents were confidential to GSK and therefore should not have been shared outside the company, because she had drafted a large percentage of them and because much (though not all) of the information contained in the documents was publicly available, she was confident that they did not contain any trade secrets. Unfortunately, this confidence was misplaced. Although the vast majority of the information in the documents was publicly available and therefore not a trade secret, there was information contained within the documents that was later determined to be trade secrets of GSK. Notably,

none of the information shared by Dr. Xue was marked as “Trade Secret” or even “Confidential.”

The documents Dr. Xue provided to Dr. Li were determined to contain GSK trade secrets in connection with fully patented drugs. While Dr. Li and Renopharma never used any of the GSK Documents for scientific purposes,<sup>3</sup> Dr. Li did tout access to this information, along with claiming an affiliation between Renopharma and Dr. Xue, in marketing materials and business plans designed to attract investors to invest in Renopharma. None of the GSK Documents were ever disseminated outside of Renopharma. Because they touted access to this information as a means “to bolster Renopharma’s credentials and reputation to secure lucrative investments and grants from private investors, government entries, and other sources,”<sup>4</sup> Dr. Xue entered a plea of guilty to one count of conspiracy to commit theft of trade secrets.

Although Dr. Li was an experienced and successful scientist, he was not experienced in researching and developing cancer fighting monoclonal antibodies. The documents provided by Dr. Xue contained information publically available in published patents and patent applications that Dr. Xue authored herself or which could be found in scientific papers and articles available on the internet. (For example, Document 33 is merely a compendium of public articles assembled by Dr. Xue for GSK.) These documents were provided to Dr. Li to provide him with general background information about monoclonal antibodies, as this is an area where he had no prior experience. Dr. Li stored these documents on his laptop computer in a folder entitled “For Learning,” meaning for background information, not scientific research and development.

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<sup>3</sup> The metadata for TL1-TL6 was analyzed by Lou Cinquanto of Cornerstone Discovery. The metadata showed that the time stamps for when the six documents were placed on Dr. Li’s computers and when they were last accessed, if ever, was identical. This information, along with all other forensic information available on the computer, showed that Dr. Li did not access the documents labeled TL1-TL6. *See* Ex. B (Affidavit of Lou Cinquanto).

<sup>4</sup> ECF 125 ¶ 64.

After an exhaustive evidentiary hearing, the evidence established, and this Court concluded, that the government failed to establish that GSK suffered any actual pecuniary loss or that the defendants purposely intended any pecuniary harm to GSK. ECF 313. GSK never lost (1) any economic opportunities, (2) the ability to use its trade secret and confidential information for research and/or profit, or (3) market share on any of its products. ECF 313 at 44. Moreover, neither Dr. Xue nor her codefendants ever used GSK's information for scientific research and did not sell or disseminate GSK's confidential and trade secret information. The defendants never realized any monetary gains as a result of their conduct and GSK was not harmed by the theft. GSK's own press release in connection with this matter confirmed unambiguously that its Research and Development ("R&D") had not been compromised as a result of Renopharma possessing its documents. ECF 313 at 32–33 n.30.

**1. GSK Never Lost Access to Its Trade Secrets and Never Lost the Ability to Use Them In Its Scientific Research or the Ability to Profit From Them.**

GSK's expert witness conceded that GSK was never deprived of access to its trade secrets contained in the GSK documents. 4/30/2019 Hr'g Tr. (Tarnowski Test.) 146:253–147:3; 5/1/2019 Hr'g Tr. (Trexler Test.) 181:25–182:2. GSK was never prevented from using the information in its own research or profiting in any way from the information. 4/30/2019 Hr'g Tr. (Tarnowski Test.) 147:4-6. GSK was not prevented from obtaining patents on the information contained in the documents taken by the Defendants. 4/30/2019 Hr'g Tr. (Haugen Test.) 74:17–18. For all GSK products that were referenced in the government's investigation, GSK either already had patents for the products or had a patent pending at the time they were shared with Renopharma, rendering them commercially worthless to any third party entity such as Renopharma. 5/1/2019 Hr'g Tr. (Villafranca Test.) 39:25–40:6.

**2. Renopharma Never Disseminated Any of the GSK Documents or Any of the Scientific Information Contained in Them.**

Renopharma never sold or disseminated GSK's documents or scientific information outside of Renopharma despite possessing most of that information for years. In fact, in many instances, the GSK documents found on Dr. Li's computer were never even accessed after being placed onto his hard drive.<sup>5</sup>

According to the Affidavit of Lina Ma, Renopharma's Research and Development Project Manager, when Renopharma outsourced its research projects, the contract laboratories used their own scientific formulas and protocols and were not provided any information by Renopharma relating to the scientific processes. Defense Exhibit 6.<sup>6</sup>

**3. Renopharma Never Used Any of the Information Contained in Any of the Approximately 200 GSK Documents Found on Dr. Li's Laptop for Scientific Purposes.**

Renopharma never used any of the information contained in the GSK Documents for any scientific purpose notwithstanding that Renopharma possessed most of this information for years. Defense Exhibit 23 (*see* slide 25, showing that Renopharma possessed GSK's documents for as long as four years). As Dr. Li explained to Agent Haugen during his post-arrest interview, Renopharma did not intend to use the GSK documents for scientific research and that the marketing materials suggesting that Renopharma had "several developed and validated humanized antibodies" and was researching antibodies targeting the well-known HER3 receptor,

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<sup>5</sup> Lou Cinquanto attested that "in reviewing the metadata of these six documents, as well as all available forensic artifacts on Dr. Li's devices, there is no evidence these six documents were accessed." Ex. B.

<sup>6</sup> These sworn affidavits were the result of a joint interview with AUSA Livermore, FBI Agent Michele Liu and an FBI Linguist, both of whom are fluent in Mandarin Chinese. The government conducted the interviews with Lina Ma and Jie Wang and their Affidavits were jointly drafted with the government. The Affidavits were entered into pursuant to stipulations to obviate the need for these witnesses to testify in person at trial and to avoid the government from having to travel outside of the country to conduct trial depositions. Given that the government was prepared to stipulate to these facts at trial, there can be no legitimate question raised about the accuracy of these statements. 4/30/2019 Hr'g Tr. (Haugen Test.) 78:8-19, Exs. C (Affidavit of Lina Ma) and D (Affidavit of Jie Wang).

amounted to “boasting” to boost Renopharma’s credibility to potential investors. 4/30/2019 Hr’g Tr. (Haugen Test.) 96:21–97:7.

Affidavits from Renopharma’s R&D Project Manager and Accountant confirmed that Renopharma did not use any GSK information. Defense Exhibits 5 and 6.

Specifically, Ms. Ma, as head of Research and Development attested under oath that she did not see or receive any GSK information, and that all of Renopharma’s scientific research was contracted out to commercial laboratories that used their own scientific processes to perform mAb processes such as purification, humanization and conjugation. Defense Exhibit 6.

**4. Dr. Xue Had Access to Much More Scientifically Valuable Information Had She Wanted to Steal Trade Secrets for Profit.**

Dr. Xue had access to millions of GSK documents including access to numerous trade secrets and non-patented (unprotected) information. This included access to information for projects on which she was not working. 4/30/2019 Hr’g Tr. (Haugen Test.) 46:3–10, 47:5–6; 4/30/2019 Hr’g Tr. (Tarnowski Test.) 169:16–19, 170:12–16. Because Dr. Xue was the author of the INDs at issue, she had access to the complete INDs and all the supporting research. 4/30/2019 Hr’g Tr. (Tarnowski Test.) 159:4–6. Dr. Xue also had access to the actual physical DNA plasmids and sequences, as well as research that had not been patented and therefore potentially marketable to a competitor pharmaceutical company. 4/30/2019 Hr’g Tr. (Tarnowski Test.) 170:1–11; 4/30/2019 Hr’g Tr. (Haugen Test.) 47:20–23. Notwithstanding this broad access to valuable GSK intellectual property, Dr. Xue only shared with Renopharma a small collection of disconnected documents and PowerPoint presentations which consisted largely of documents she drafted herself and mistakenly believed had been publically disclosed in related patent documentation. 4/30/2019 Hr’g Tr. (Haugen Test.) 16:7–18.

Had she wanted to profit from stealing GSK trade secret information, Dr. Xue could have stolen much more comprehensive, detailed and specific scientific research about any number of drugs that were under development, including valuable and potentially marketable *unpatented* drugs which could be reverse engineered to reveal their genetic make-up. 4/30/2019 Hr’g Tr. (Tarnowski Test.) 169:16–170:20.

Dr. Xue worked extraordinarily long hours while at GSK and was the mother of small children. She frequently worked on documents at home on her GSK laptop. At times, she accessed the GSK network from personal devices while she was at home. While this may have been a technical violation of GSK guidelines, it was nevertheless a common practice of GSK employees and not done for an improper purpose.

To the extent that certain confidential or trade secret information was provided, it was provided piecemeal, over many months, with no real cohesive theme regarding any one specific drug. The stray trade secret information was often imbedded in documents such as power point presentations that contained otherwise publically available information, as opposed to the documents containing the actual scientific research.

**5. Renopharma Did Not Use Any GSK Information in Its Own Research.**

Renopharma did not conduct any research on HER-3 or any of the other drugs referenced in the documents taken by Dr. Xue. Renopharma’s Annual Report, an internal record of Renopharma’s research, shows that the company was primarily researching PDL-2 and PD-1, targets which GSK was not researching. *See* Defense Exhibit 8; 4/30/2019 Hr’g Tr. (Tarnowski Test.) 186:7–187:23; 5/2/2019 Hr’g Tr. (Field Test.) 38:11–39:11. Renopharma did not conduct research on IL-7, despite possessing GSK’s IND on IL-7 (TL-3). 4/30/2019 Hr’g Tr. (Haugen

Test.) 62:16–63:16; 4/30/2019 Hr’g Tr. (Tarnowski Test.) 178:17–19; Defense Exhibit 8. In conducting its own research, Renopharma outsourced all the scientific steps for raising the monoclonal antibodies. 4/30/2019 Hr’g Tr. (Haugen Test.) 85:15–23; 5/2/2019 Hr’g Tr. (Field Test.) 24:7–2; Defense Exhibits 5 & 6. The third party laboratories used their own research methods to conduct the experiments and procedures. Defense Exhibits 5 & 6. No GSK information was used in Renopharma’s research.

## **II. THE SENTENCING GUIDELINES SHOULD BE A LEVEL 6, NOT A LEVEL 10**

The pre-sentence report determined that Dr. Xue’s adjusted sentencing guideline should be a level 10. The report comes to this determination after adding a 4 level adjustment for Dr. Xue’s role in the offense because Dr. Xue was “an organizer or leader of a criminal activity that involved five or more participants or was otherwise extensive” pursuant to USSG § 3B1.1(a). This is incorrect. Dr. Xue was not an “organizer or leader” of this conspiracy and, therefore, this enhancement would be improper. Dr. Xue neither came up with the idea for Renopharma nor was the driving force behind it. More critically, she had no supervisory or superior role in the conspiracy. She never directed *anyone* to do *anything*. If Renopharma had become a viable enterprise, she clearly would have played an important role in it. But the company never got off the ground and, more critically, having an important role in a conspiracy is distinct from being an “organizer or leader,” as the case law has recognized. *See United States v. Pimentel-Lopez*, 859 F.3d 1134, 1143–44 (9th Cir. 2016) (“even a defendant with an important role in an offense cannot receive an enhancement unless there is also a showing that the defendant had control over others”); *United States v. Chau*, 293 F.3d 96, 103 (3d Cir. 2002) (“[A] manager or supervisor is one who exercises some degree of control over others involved in the offense.”) (internal quotations omitted). As there is no evidence that Dr. Xue had any control over anyone else



engaged in this conspiracy, and did not direct anyone to do anything, no enhancement for “organizer or leader” can be properly imposed. Because the government must establish this enhancement by a preponderance of the evidence, and there is no such evidence supporting the contention that Dr. Xue organized or directed anyone, no enhancement is appropriate.

### **III. DR. XUE’S EXTRAORDINARY VOLUNTEER WORK IN HER COMMUNITY WARRANTS A DOWNWARD DEPARTURE.**

Since her arrest on this case in January 2016—over five years ago—Dr. Xue has been out of work and, given her legal status, hardly in a position to look for a new job. But rather than give in to despair or depression, Dr. Xue has devoted herself to helping the children in her community in math and science. She has devoted many thousands of hours to teaching hundreds of children, almost entirely without pay. Her charitable works are nothing short of extraordinary.

For the school years of 2017 and 2018—running from September until May, each year—Dr. Xue taught approximately fifty children, ages eight to thirteen every Friday evening from 7:00 p.m. to 9:00 p.m. at St. Luke’s Church and each Sunday afternoon from 1:00 p.m. to 4:00 p.m. at the Hua Xia Chinese school (a 503c based organization) to compete in MathCounts. This was the first time Dr. Xue had taught children other than her own, and she found that it brought her great joy. Although not all of her students were ethnically Chinese, she established her classroom in the Chinese school and welcomed any and all to join. She was happy to share her knowledge and experience with the general community, and was thrilled to see the look on her students’ faces when they finally understood a problem that had been challenging them. Dr. Xue received no pay for her teaching; it was all volunteer work done to help others.

In addition, from January 2019 to March 2019, Dr. Xue volunteered to do mathematics coaching at Valley Forge Middle school for about ten MathCount competitors on Tuesday

afternoons from 3:30 p.m. to 5:30 p.m. (at the Tredyffrin Public Library) and Sunday evenings from 7:00 p.m. to 9:00 p.m. (at Saint Luke Church) to prepare students for the state math competitions at the end of March.

Between September of 2019 and May of 2020, Dr. Xue volunteered to teach MathCounts material at the Great Wall Chinese school, every Sunday afternoon from 12:00 p.m. to 4:00 p.m. This involved teaching approximately twenty students, with ten in each class, between the ages of eight to thirteen.

From January 2020 until March 2020, Dr. Xue volunteered as a coach for Chest County MathCount candidates selected for state math competition. This involved teaching approximately ten students each Sunday, from 7:00 p.m. to 9:00 p.m.

From March 2020 to June 2020, Dr. Xue volunteered to coach and proctor the Lehigh ARML (American Regional Math League) mathematics team. She assisted by teaching ARML material and proctoring tests by Zoom. She did this every Sunday afternoon from 3:00 p.m. to 7:00 p.m. for three months. The approximately seventy-five students came from Pennsylvania, New Jersey and Delaware (ages twelve to seventeen) to prepare for a national high school math competition in June.

During the summer of 2020, Dr. Xue taught seventy students ranging in age from ten to seventeen years of age, in mathematics, AP Chemistry, and AP biology every day from 9:00 a.m. to 4:00 p.m. Although Dr. Xue received some compensation for this teaching, she provided financial aid and free lessons for any families that were unable to pay.

Finally, beginning in September 2020 and scheduled to continue until May 2021, Dr. Xue again volunteered to teach about twenty students, ranging from eleven to seventeen years of age, two levels of MathCounts, AP biology, AP chemistry, and AP calculus at the Great Wall Chinese

School Sunday school, from 10:00 a.m. to 6:00 p.m. In addition, during this same time frame, Dr. Xue also taught four levels of mathematics, including middle school and high school, to approximately eighty students, from 12:00 p.m. until 9:00 p.m. on every Saturday afternoon. The only remuneration Dr. Xue received for this teaching was a monthly stipend of about \$500, most of which she used to pay for awards for the students at the end of the month.

Dr. Xue is also scheduled to teach extensively this summer and fall. From June 14 to June 25, she is scheduled to teach approximately twenty 7<sup>th</sup> to 11<sup>th</sup> grade students at math camp. From July 2 to July 9 she is scheduled to teach 9<sup>th</sup> to 11<sup>th</sup> grade students in AP chemistry. From July 12 to July 23, she is scheduled to teach 9<sup>th</sup> to 12<sup>th</sup> grade students in AP biology. From July 26 to July 30, she is scheduled to teach 9<sup>th</sup> to 12<sup>th</sup> grade students in AP calculus. Each camp session is ten days, seven hours per day (9:00 a.m. to 4:00 p.m.). The entire camp will be a total of 280 hours of teaching time by Dr. Xue.

Starting on August 20, Dr. Xue is scheduled to start the new school year by teaching Saturday math class for four different grades, each with fifteen to twenty students. And on Sundays, starting this fall, Dr. Xue is scheduled to teach about fifty students, ranging from ten to seventeen years of age, from 10:00 a.m. to 6:00 p.m. These classes, which will be at the Great Wall Chinese school, will involve two levels of math, AP calculus, AP biology, AP chemistry and AP physics.

Dr. Xue also provided assistance to friends in need. When a friend and former colleague from GSK's husband was killed in an accident, Dr. Xue reached out to help with her friend's daughter. Dr. Xue would pick up the little girl from school and chaperone her to all of her activities. She also tutored the child in math when she needed help.

All of this charitable work is so extraordinary that it is deserving of a downward departure pursuant to USSG § 5H1.11 (Military, Civic, Charitable, or Public Service; Record of Prior Good Works). *See United States v. Canova*, 412 F.3d 331, 358–59 (2d Cir. 2005) (affirming a downward departure for an ex-Marine who as a volunteer firefighter, rescued a small child from a burning building, delivered three babies and administered CPR to persons in distress); *United States v. Huber*, 462 F.3d 945, 952 (8th Cir. 2006) (affirming a downward departure for a defendant who had loaned money to neighbors and fellow farmers in need, saving farms from foreclosure); *United States v. Cooper*, 394 F.3d 172, 177–78 (3d Cir. 2005) (allowing a downward departure for community service that was “hands-on” and likely had a dramatic and positive impact on the lives of others).

There can be no question that the extraordinary volunteer work by Dr. Xue in teaching math and science to the children in her community has “had a dramatic and positive impact on the lives of others.” As the letters submitted to the Court attest, Dr. Xue has positively changed the lives of countless young people. For example, Allen Lo and Camilla Li stated that Dr. Xue “motivates our son to do his work on a new level. He just earned an Honor Roll (top 5% nationally) award with his recent AMC8 contest. This would never have happened if it wasn’t for Ms. Xue’s enthusiasm and devotion for youth education.” Ex. E at 15. James and Jessica Song wrote that after Dr. Xue “opened an online summer class . . . last summer. . . . [P]arents [could] see the joy from the kids’ eyes, [their] thirst for learning and their appreciation of Ms. Yu Xue’s endless dedication. It’s no secret that Ms. Yu Xue is kids’ beloved teacher and mentor in life. We can see the huge positive impact she had on children’s academic learning and lifelong lesson of generous giving without expecting in return.” *Id.* at 3. Laura Yao-Nieh, the Principal of Great Wall Chinese School, writes that Dr. Xue is an “invaluable member of our staff. She is adored by

her students and parents alike.” *Id.* at 4. Penghui Hao writes that her son was “among the youngest students in Yu’s mathematics class and tended to be very shy and quiet during her class. Yu has always been willing to spend additional time either after the class or calling my son on Sunday night to help him keep up with the class.” *Id.* at 9. And Sherry Liu writes that her son has been tutored by Dr. Xue for more than four years and “she has become the most trusted mentor for my son, as well as a lot more kids around this area.” *Id.* at 10.

And this is but a sampling of the letters that have detailed the devotion Dr. Xue has shown to educate and mentor the children in her community. In giving of her talents so selflessly and without financial reward, Dr. Xue has given back immeasurably to her community. Because her volunteer work has been so extraordinary it is deserving of a downward departure pursuant to USSG § 5H1.11.

**IV. THE GUIDELINES ARE ADVISORY, AND THE SENTENCE SHOULD BE NO GREATER THAN NECESSARY TO SATISFY THE STATUTORY PURPOSES UNDER § 3553(A).**

At the outset of sentencing, the Court must determine the applicable Sentencing Guidelines range. *See Molina-Martinez v. United States*, 136 S. Ct. 1338, 1342 (2016). Although the Guidelines were once mandatory, following *United States v. Booker*, 543 U.S. 220 (2005), the Guidelines no longer carry the force of law, federal judges are no longer bound to strictly apply them, and “[a] district court may not presume that a Guidelines sentence is reasonable.” *United States v. Cavera*, 550 F.3d 180, 189 (2d Cir. 2008) (en banc). The Guidelines are now purely advisory, and the Court has significant discretion to vary from the Guideline range. *See id.* at 187–88. Instead of applying the Guidelines as compulsory, the Court has discretion to impose a non-Guideline sentence as long as the sentence is reasonable and justified. *See United States v. Jimenez-Beltre*, 440 F.3d 514, 518 (1st Cir. 2006) (en banc) (“*Booker*’s remedial solution makes

it possible for courts to impose non-guideline sentences that override the guidelines, subject only to the ultimate requirement of reasonableness.”), *abrogated on other grounds by Rita v. United States*, 551 U.S. 338 (2007); *see also Koon v. United States*, 518 U.S. 81, 96–97 (1996) (determining that a district court is vested with broad discretion to depart from the Guidelines); USSG § 5K2.0 (2018).

The Guidelines are now but a “starting point and initial benchmark” for sentencing. *Gall v. United States*, 552 U.S. 38, 39 (2007). After calculating the Guidelines range, the Court must then “make an individualized assessment based on the facts presented” by the parties. *Id.* Post-*Booker* sentencing involves two steps—after the first step of calculating the Guideline range, the Court must engage in the second step of considering the § 3553(a) factors to determine a reasonable sentence. *See United States v. Talley*, 431 F.3d 784, 786 (11th Cir. 2005), *abrogated on other grounds by Rita*, 551 U.S. at 338. Just as the Court has discretion to impose a non-Guidelines sentence, “the weight to be afforded any § 3553(a) factor is a matter firmly committed to the discretion of the sentencing judge.” *United States v. Verkhoglyad*, 516 F.3d 122, 131 (2d Cir. 2008) (quotation marks omitted). Furthermore, the Court has discretion to decide whether any § 3553(a) factor justifies a downward variance. *See Gall*, 552 U.S. at 51. When imposing a sentence outside the Guidelines range, the Court applies a non-mathematical formula with individualized assessments based on facts presented by the parties. *Id.* at 47, 50.

This Court must be guided by the fact that the ultimate sentence should be “not greater than necessary to accomplish the sentencing goals advanced in § 3553(a)(2).” *Kimbrough*, 552 U.S. at 89, 111 (quotation marks omitted).

**A. A non-custodial sentence is appropriate in light of Dr. Xue ’s personal history and characteristics (§ 3553(a)(1)).**

Dr. Xue is responsible for her conduct. Her embarrassment and shame are palpable. She

deeply regrets her conduct and how it has impacted not just her, but her two siblings—both of whom have been charged in connection with this case.<sup>7</sup> But as her support letters attest, she is an extraordinary person. Dr. Xue has spent the past four years devoting her time and energy to teaching and mentoring the youth in her community. She has spent thousands of hours, almost entirely unpaid, helping these children master math and science. This volunteerism is both a testament to her character and a tremendous benefit to her community.

The letters submitted on her behalf depict a person who is a devoted, caring and selfless friend and mentor to those who know her.

- “Dr. Xue is trustworthy and a great asset to our community. She is the go-to person and expert in science-related fields, and she has been our daughter’s mentor for her high-school research project. As soon as she heard our daughter needed a second trustworthy opinion, she offered her resources and her expertise freely. Ms. Xue gladly provided guidance for younger generations and is always willing to invest her time in developing our future leaders in order to give back to our community.”<sup>8</sup>
- “A few years ago, I had surgery. The recuperation was unexpectedly hard. One afternoon I fell asleep on my living room sofa. I woke up to a lovely spicy smell. Looking around, I found a delicious Chinese dinner resting on my coffee table. I recognized Yu’s china and realized that she had cooked a delicious dinner for me and left it while I slept.”<sup>9</sup>
- “Ms. Yu Xue is, in short, a great person. She has always been kind and generous with others. She has a strong sense of duty and responsibility, which applies in her job, family and community. We are fortunate to get to know her about 5 or 6 years ago when my girls need some help in the science classes. . . . [S]he has proven to us to be of a fine and responsible character . . . [S]he has always been there for us and our family over the years through the good times as well as some difficult times, and she was the source of camaraderie for us and for our family and whatever she is needed for. . . . [A]bout three years

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<sup>7</sup> In the case of her brother, Gongda Xue, the government has entirely misinterpreted emails that Dr. Xue sent to Gongda in order to help prepare him for an anticipated job interview. The emails had nothing to do with Renopharma and Gongda had no role whatsoever in connection with that prospective business. Nevertheless, had Dr. Xue not sent those documents to her brother, he would not have been extradited from Switzerland and awaiting trial in Philadelphia.

<sup>8</sup> Letter from Allen Lo and Camilla Li, Ex. E at 15.

<sup>9</sup> Letter from Bobbie McAllister, Ex. E at 17.

ago, [ ] the Community School [ ] suffered from budget shortfall and some of the science and math classes school offered [had] to be reduced or completely eliminated from the curriculum [and Ms. Xue] immediately volunteered to teach at the school without any financial compensation.”<sup>10</sup>

- Ms. Xue “is extremely patient in explaining each subject to our students with her broad familiarity in mathematics and science. Her great passion in teaching and excellent teaching skills makes her an invaluable member on our staff. She is adored by her students and parents alike.”<sup>11</sup>
- “[M]y son and a lot of kids who have attended her class just adore her, simply because she inspires the kids, and always brings out the best of the kids and all of us parents. . . . [S]he is one of the most intelligent and hardworking persons I’ve ever known. But most importantly, Yu has the biggest heart; it is her greatest quality and probably also her biggest flaw. She simply cannot say no to her friends. She has volunteered teaching at the Chinese schools for free. She has helped kids from single parent families who entrusted her not only with academics but also their growing pains that they are not willing to share with parents. . . . She has been supportive of others in their good times or bad times. Yu has volunteered her time at the church; she was around when my son had a car accident; she donated money to her college friend who lost his family member to cancer; she has lent a helping hand to friends who have become single mothers; she had been there when I was laid off.”<sup>12</sup>
- Yu is a kind and sincere person who always enjoys helping other people. . . . Yu was always there to help me. . . . I did not have a car at that time. You would offer me a ride to wherever I need. When there was a major holiday, such as Christmas or New Year, Yu would invite me to her home to have dinner with her family and friends, which made my early days in U.S. much more comfortable. . . . Yu offered me a lot of help on settling down in the area as well as starting my new job. Yu has been so helpful at different stages of my life since I came to U.S. I always feels so lucky to have a friend like her.”<sup>13</sup>

These comments are but a sampling of the praises heaped on Dr. Xue by those who know her. They uniformly describe a person of great generosity who gives of herself to anyone in need. She lifts up those around her in any way that she can.

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<sup>10</sup> Letter from James and Jessica Song, Ex. E at 2.

<sup>11</sup> Letter from Laura Yao-Nieh, Ex. E at 4.

<sup>12</sup> Letter from Sherry Liu, Ex. E at 10.

<sup>13</sup> Letter from Yuan Cheng, Ex. E at 14.



**B. Dr. Xue poses no danger to the community and is no threat to reoffend.**

With the exception of the present criminal proceeding, Dr. Xue has never been accused of wrongdoing. As such, nothing in her past suggests any criminal tendencies. As a result of her conviction, Dr. Xue will not be able to work in her chosen profession and thus could not reoffend. There is, therefore, no risk of recidivism. Thus, this factor does not support a custodial sentence, let alone one within the Guidelines range.

In addition, Dr. Xue clearly poses no threat to society. There has never been a suggestion by anyone that Dr. Xue could be violent.

Moreover, the devastating impact of this conviction will reverberate on Dr. Xue and her family for the remainder of her life. Incarcerating Dr. Xue would serve no societal purpose. The bulk of the conduct at issue here occurred between six and nine years ago. Five years ago, Dr. Xue was arrested and charged in this case. After eight days in custody, Dr. Xue was ordered release under Court supervision. In the more than five years she has spent on supervised release, she has not had a single incident of non-compliance. The same level of compliance could be expected if Dr. Xue were given probation or home confinement. She will comply fully and faithfully with any requirements imposed by the Court.

**1. Dr. Xue has already paid an enormous price for her conduct.**

The impact of this case on Dr. Xue and her family is impossible to overstate. Put simply, the impact has been devastating and has impacted virtually all aspects of their lives. Dr. Xue immediately lost her job and, as a result of media reports, faced the shame and embarrassment of being arrested—and now convicted—of a serious felony.

Dr. Xue was fired by GSK at the time of her arrest in early January, 2016. She has been unemployed since then. In addition to losing half her family's income, Dr. Xue and her family

has had to pay—as best as they have been able—counsel to defend her the past five years.<sup>14</sup> The financial toll this case has taken on her family has impacted all aspects of her family.

The family had to sell two rental properties they owned to finance her defense, as well as having to cash out both of their retirement accounts, incurring enormous tax penalties. They now live in a small (less than 1000 square foot), two-bedroom apartment. Dr. Xue's daughter has had to sleep on the couch in the living room for the past five years, as she has no room of her own. The apartment is so small that the daughter has to do her Zoom classes out on the small balcony, even in the cold weather, just so she can have a quiet place to work.

Dr. Xue and her husband have had to liquidate their 401(k) accounts that they had been saving for their retirement, even though emptying those accounts incurred heavy tax penalties.

It is extremely painful for Dr. Xue that she has been, as a result of her conduct, unable to provide any material benefits for her children. They both have learned not to even ask for things that their peers take for granted. Of course big items like family vacations are out of the question. But even things like a chocolate bar or a soda after sports practice are a luxury that cannot be afforded. By now the children accept this reality without complaint and know not even to ask for things. But for Dr. Xue, having to deprive her children because of her own bad decisions is heartbreaking.

The ripple effects of the case go still further. Dr. Xue has been unable to visit her elderly mother in China since her arrest more than five years ago. Her mother is widowed and lives alone and is in poor health. But neither Dr. Xue nor her siblings are able to visit their mother, all because of this case. This reality makes Dr. Xue feel deep shame and sadness.

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<sup>14</sup> Dr. Xue has paid approximately \$625,000 in legal fees defending this case over the past five years and still owes significantly more.

Further, as a result of this conviction, Dr. Xue will never work in her chosen career path as a scientist. That door has been permanently shut to her—an enormous penalty given that she had devoted her entire professional life to attaining that position.

Moreover, the notoriety and opprobrium associated with a criminal conviction of this nature for a scientist means that Dr. Xue will never have (or be able to regain) the life she had. It is over. And that is the case regardless of the sentence ultimately imposed. These consequences, too, are a form of punishment. *See, e.g., United States v. Anderson*, 533 F.3d 623, 633 (8th Cir. 2008) (upholding below-Guidelines sentence in part because district court found that “defendant had suffered atypical punishment such as the loss of his reputation and his company”); *United States v. Malik*, 424 F. App’x 122, 127 (3d Cir. 2011) (affirming a below-Guidelines sentence in part because the defendant “was punished by the reputational harm he suffered as a result of the criminal action”); *United States v. Redemann*, 295 F. Supp. 2d 887, 894–97 (E.D. Wis. 2003) (downward departure warranted where defendant suffered serious collateral consequences from conviction); *United States v. Samaras*, 390 F. Supp. 2d 805, 809 (E.D. Wis. 2005) (imposing below-Guideline sentence in part because, “as a consequence of his conviction and sentence, defendant lost a good public-sector job, a factor not considered by the Guidelines”); *United States v. Vigil*, 476 F. Supp. 2d 1231, 1315 (D.N.M. 2007) (in considering justness of sentence, “it is important to consider all other forms of punishment [defendant] has already suffered,” including loss of job and damage to his personal and professional reputation), *aff’d*, 523 F.3d 1258 (10th Cir. 2008); *United States v. Olis*, No. H-03-217-01, 2006 WL 2716048, at \*13 (S.D. Tex. Sept. 22, 2006) (substantial variance warranted in part because “the attendant negative publicity, the loss of his job and accounting and law licenses, and the need to provide support for his family will provide adequate deterrence against any potential future criminal conduct”).

**2. A non-custodial sentence would reflect the seriousness of the offense, promote respect for law, and provide just punishment.**

While the offense of Conspiracy to Commit Theft of Trade Secrets is unquestionably serious, the abundance of mitigating circumstances in this particular offense make it unique. It is almost impossible to imagine a comparable case, where a similarly charged defendant did not appreciate or intend to steal trade secrets (vs. confidential information); never intended to harm the victim; did not, in fact, cause any harm to the victim; never actually utilized the stolen materiality; and did not benefit in any way from the theft. In these unique circumstances, a non-custodial sentence is entirely just and appropriate, and would promote respect for the law.

**3. A non-custodial sentence is warranted because Dr. Xue requires no correctional treatment (§ 3553(a)(2)(D)).**

Dr. Xue does not require any educational or vocational training, medical care, or other correctional treatment that would warrant a custodial sentence, let alone one within the Guidelines range. This supports a sentence without incarceration.

**C. A non-custodial sentence is available and warranted (§ 3553(a)(3)).**

Under § 3553(a)(3), the Court must consider “the kinds of sentences available” when determining an appropriate sentence and the Court has complete discretion to impose a non-custodial sentence, such as probation or home detention. The Court also has discretion to impose conditions to such a sentence that are in the public interest.

Courts have recognized that it can be in the public’s best interest to impose a non-custodial sentence on a defendant who, like Dr. Xue, has significant abilities. For instance, in *United States v. Smith*, No. 1:06-CR-00394, 2009 WL 249714 (N.D. Ohio Feb. 2, 2009), the court explained that community service would put the defendant’s skills as an accountant and lawyer to better use than prison and that the defendant’s “abilities . . . would otherwise be wasted

during a more lengthy prison term.” *Id.* at \*4. Other courts have agreed. *See, e.g., United States v. Warner*, 792 F.3d 847, 854 (7th Cir. 2015) (affirming sentence of two years of probation despite Guidelines range of 46–57 months where district court found that “society will be best served by allowing [the defendant] to continue his good works outside of prison”) (internal quotations omitted); *United States v. Coughlin*, No. 06-CR-20005, 2008 WL 313099, at \*7 (W.D. Ark. Feb. 1, 2008) (imposing a sentence of home confinement, five years of probation, and 1,500 hours of community service to company executive despite Guidelines range of 27–33 months in part because his “expertise is better put to use than wasted in the physical deterioration of unnecessary imprisonment”). Recently, Judge Analisa Torres sentenced Dr. Alexander Neumeister, a prominent neurological researcher at Yale and New York University (“NYU”), who pled guilty to stealing from NYU and various grant programs from 2012–2014, to three years’ probation and to play the piano for an hour at least twice a week for three years for elderly group facilities after being alerted to Mr. Neumeister’s background as a trained pianist in the pre-sentence investigation report. *See* Tr. at 29–30, *United States v. Neumeister*, No. 18-cr-385 (AT) (S.D.N.Y. Nov. 7, 2018), ECF No. 42.

A non-custodial sentence is in the public’s and Dr. Xue’s best interest, in this case as a sentence of probation with other conditions—such as community service, including having Dr. Xue continue to teach and mentor students in her community in math and science. Such a sentence would benefit society far more than sending Dr. Xue to prison.

**D. The need to avoid unwarranted sentencing disparities among defendants supports a non-custodial sentence (§ 3553(a)(6)).**

One of the fundamental goals of the Sentencing Guidelines is to avoid sentencing disparities, such that similarly situated defendants are treated similarly. *See* 18 U.S.C. § 3553(a)(6) (“The court . . . shall consider . . . the need to avoid unwarranted sentence disparities

among defendants with similar records who have been found guilty of similar conduct . . . .”); *Booker*, 543 U.S. at 253–54 (“Congress’ basic goal in passing the Sentencing Act was to move the sentencing system in the direction of increased uniformity. That uniformity does not consist simply of similar sentences for those convicted of violations of the same statute . . . . It consists, more importantly, of similar relationships between sentences and real conduct, relationships that Congress’ sentencing statutes helped to advance . . . .” (citation omitted)).

A review of theft of trade secrets cases prosecuted around the country makes clear that defendants charged in far more serious crimes—involving losses far greater and/or more egregious conduct—are routinely given below-guideline and, very often, non-custodial sentences. For example:

***United States v. Xie***, No. 14-cr-205 (E.D. Wis. 2014):

- Defendant was an application engineer for GE Healthcare and wrote source code for MRI technology software.
- After defendant’s family left for China, he decided to join them, but not before downloading 2.4 million files from GE over a two-month period.
- Defendant then sent GE’s stolen files to his family in China so that he could form his own business overseas.
- Defendant was apprehended just days before flying to China.
- Defendant pled to one count of theft of trade secrets and acknowledged that the loss amount was between \$100–200 million leading to an offense level of 30.
- Defendant was sentenced to 24 months of probation.

***United States v. Robert & Howley***, No. 08-cr-175 (E.D. Tenn. 2008):

- Defendants were employees of Wyko US, a tire technology company, whose parent company, Wyko Group, was based in England.
- Wyko China, a subsidiary of Wyko Group, won a \$1.2 million contract with a Chinese rubber company.
- The contract was for a heavy-duty tire that required a “swab down system,” something Wyko had never produced.
- Defendants traveled to Kansas to visit Goodyear Tire’s facility, and pretended they were there on behalf of Wyko US to assist with a joint project. While there, they signed Goodyear confidentiality agreements before secretly photographing and copying Goodyear’s “swab down” products. They sent the photographs to Wyko’s office in England.
- The jury convicted the defendants on 10 counts, including theft of trade secrets and

transmission of trade secrets.

- The court found that the defendants knew that they were working for an instrument of the Chinese government, and found a loss amount of \$307,000.
- Despite a Guideline range of 37–46 months imprisonment, both defendants were sentenced to 48 months of probation and 150 hours of community service.

***United States v. Yang***, No. 11-cr-458 (N.D. Ill. 2011):

- Defendant was a software engineer for the Chicago Mercantile Exchange (“CME”) who downloaded over 20,000 files over a six-month period from CME’s computers.
- Defendant then tried to form a new company in China with two Chinese business partners that would increase trade volume on China’s chemical trading exchange.
- Defendant pled guilty to two counts of stealing CME’s source code and selling it to a Chinese exchange.
- The government and probation submitted a loss amount of \$23 million, and an offense level of 25.
- The court rejected the loss calculation, found a Guideline range of 30–37 months, but imposed a sentence of 48 months of probation.

***United States v. Xiang***, No. 14-cr-160 (M.D.N.C. 2014):

- Defendant worked at RF Micro Devices (“RFMD”), a radio component company, first as an engineer, and later as an International Sales Manager in China.
- Over three years, the defendant and his co-conspirators stole trade secrets from RFMD’s computer network, and sent them to third-party emails to avoid detection.
- The defendant and his co-conspirators then founded two competitor companies.
- Despite a 10-level loss enhancement, defendant was sentenced to 60 months of probation, a \$175,000 fine, and \$127,657.16 in restitution.

***United States v. Zhang***, No. 10-cr-827 (N.D. Cal. 2010):

- As a senior software engineer and director of software development at SiRF Tech., defendant downloaded over 100,000 files with millions of lines of source code valued at \$1.7 million.
- Defendant intended to use this code at a company he founded prior to accepting a position at SiRF.
- Defendant never disclosed to his employer during his seven-year tenure with SiRF that he owned a competing company. Defendant also recruited co-workers from SiRF to join his company.
- Defendant received a sentence of 60 months of probation and a \$20,000 fine.

***United States v. Tezock***, No. 3:14-cr-00211 (N.D. Tex. 2014):

- Defendant was fired from Voltaix, a chemical manufacturer that made Germane, a special gas that is difficult to develop. Before leaving, he began compiling Germane-related trade secrets for his own company, which manufactured, produced, purified, and sold Germane based on Voltaix’s technology.
- Over nearly six years, the defendant used Voltaix’s trade secrets to benefit himself

and harm Voltaix. He also tried to steal business by soliciting one of Voltaix's biggest customers.

- Defendant then tried to cover up his scheme by lying under oath during civil litigation.
- After pleading guilty to four counts of theft of trade secrets, defendant was sentenced to 60 months of probation and was ordered to pay \$4 million restitution.

***United States v. Grande***, No. 3:07-cr-19 (D. Conn 2007):

- Defendant worked for Duracell, where he stole trade secrets via downloads and email, which he then sent to two competitors, who returned the information to Duracell.
- The defendant's goal was to harm Duracell executives by reducing their bonuses, and he was found to have intended a loss of \$3 million.
- The court sentenced the defendant to 60 months of probation, a \$7,500 fine, and 200 hours of community service.

***United States v. Qin, et al.***, No. 10-cr-20454 (E.D. Mich. 2010):

- Defendants were a married couple. The husband worked at an electricity power equipment company, and the wife worked as an engineer for GM.
- Over two-and-a-half years, the wife stole trade secrets relating to hybrid vehicles so that she and her husband could found their own company and make more money.
- The wife sought a reassignment within GM to further gain access to trade secrets related to hybrid technologies.
- The defendants were convicted by a jury of multiple counts of theft of trade secrets, and the husband was also convicted of wire fraud and obstruction of justice.
- With a loss amount between \$10–20 million, both defendants had a guideline range of 78–97 months in prison. In the case of the wife, the court agreed to lower the offense level to 20, and sentenced her to a below-Guideline sentence of a year and a day, 12 months of supervised release, and a \$12,500 fine. For his additional charges, the husband was sentenced to 36 months imprisonment and a \$25,000 fine, well-below the Guideline range.

***United States v. O'Rourke***, No. 17-cr-495 (N.D. Ill. 2017):

- Defendant worked for chemical manufacturing company, Dura-Bar, for 31 years before accepting an executive-level job at a Chinese chemical company.
- Two days before resigning, defendant downloaded dozens of Dura-Bar's files without authorization. These files included lab reports and other trade secrets.
- A jury found defendant guilty on seven counts of theft of trade secrets.
- Despite founding a loss amount of \$333,500 and an offense level of 22, the court found that the Guidelines were "more severe than what's necessary," and "driven in large part by loss calculation..." (O'Rourke Sentencing Tr. 173)
- The defendant received a sentence of a year and a day imprisonment and 36 months of supervised release.



***United States v. Newman***, No. 14-cr-704 (N.D. Ill. 2014):

- Defendant worked as a trader at a firm that developed software for trading computations involving futures, options, and equities.
- The firm maintained strict security over its trade secret software, including banning non-workers from entering the firm.
- The defendant downloaded the firm's secret information on three separate occasions, and then left immediately after receiving his annual bonus to found his own firm, where he planned to use the stolen information.
- According to probation's PSR, the intended loss was between \$20–25 million, which, along with other enhancements, led to a Guideline level of 28. Defendant disagreed and argued that loss was most appropriately valued at \$2.3 million.
- The court sentenced the defendant to a year and a day, plus 24 months of supervised release and a \$100,000 fine.

***United States v. Mulhollen***, No. 10-cr-13 (W.D. Ky. 2010):

- Defendant attempted to steal “starter tobacco,” a key ingredient in making moist tobacco products, from Swedish Match, a Kentucky company. He intended to take the stolen ingredient to the Dominican Republic, where he and his associates planned to start a company to market moist tobacco products to Asia and across South America.
- The court found an intended loss of \$1 million, and sentenced him to a year and a day imprisonment, plus two years of supervised release.

***United States v. Sing***, No. 14-cr-212 (C.D. Cal. 2014):

- Defendant, an employee of the victim company, emailed trade secrets to competitors to cripple the company.
- Probation's PSIR found a \$1.2 million loss.
- After being convicted on five counts of unauthorized transmission and possession of a trade secret, the court sentenced the defendant to a year and a day.

***United States v. Lee***, No. 1:09-cr-290-1 (N.D. Ill. 2009):

- Over a period of five months, the defendant stole trade secrets from his employer, Valspar, ahead of beginning a job with a competitor.
- The Defendant stole 160 formulas for manufacturing paints, sales and pricing data, research, and other materials.
- The elaborate scheme involved gaining access to files that the defendant could not access by having co-workers place desired files in a special folder that he could copy. The defendant deleted his computer history to cover his tracks.
- The defendant also attempted to recruit Valspar's employees to work for him in Asia, including a high-level scientist with knowledge of paint manufacturing.
- The court found a loss of \$7–20 million, resulting in an offense level of 25, but imposed a sentence of 15 months imprisonment and 26 months of supervised release.

***United States v. Wilkinson***, 07-CR-570-2 (D. Md. 2007)

- The defendant, co-director of an aviation company, entered into a consultant agreement with an employee of a direct competitor for confidential information about the competitor in exchange for money.
- The defendant used the confidential information to bid on and procure aviation fuel supply contracts from the Defense Energy Support Center, a logistics agency of the United States Department of Defense.
- The defendant pleaded guilty to conspiracy to defraud the United States, conspiracy to commit wire fraud, and conspiracy to steal trade secrets.
- The court determined that defendant's advisory Guidelines sentencing range was 12–18 months' imprisonment.
- The court sentenced him to 36 months of probation, 800 hours of community service, and restitution. He was discharged from supervision after 13 months.

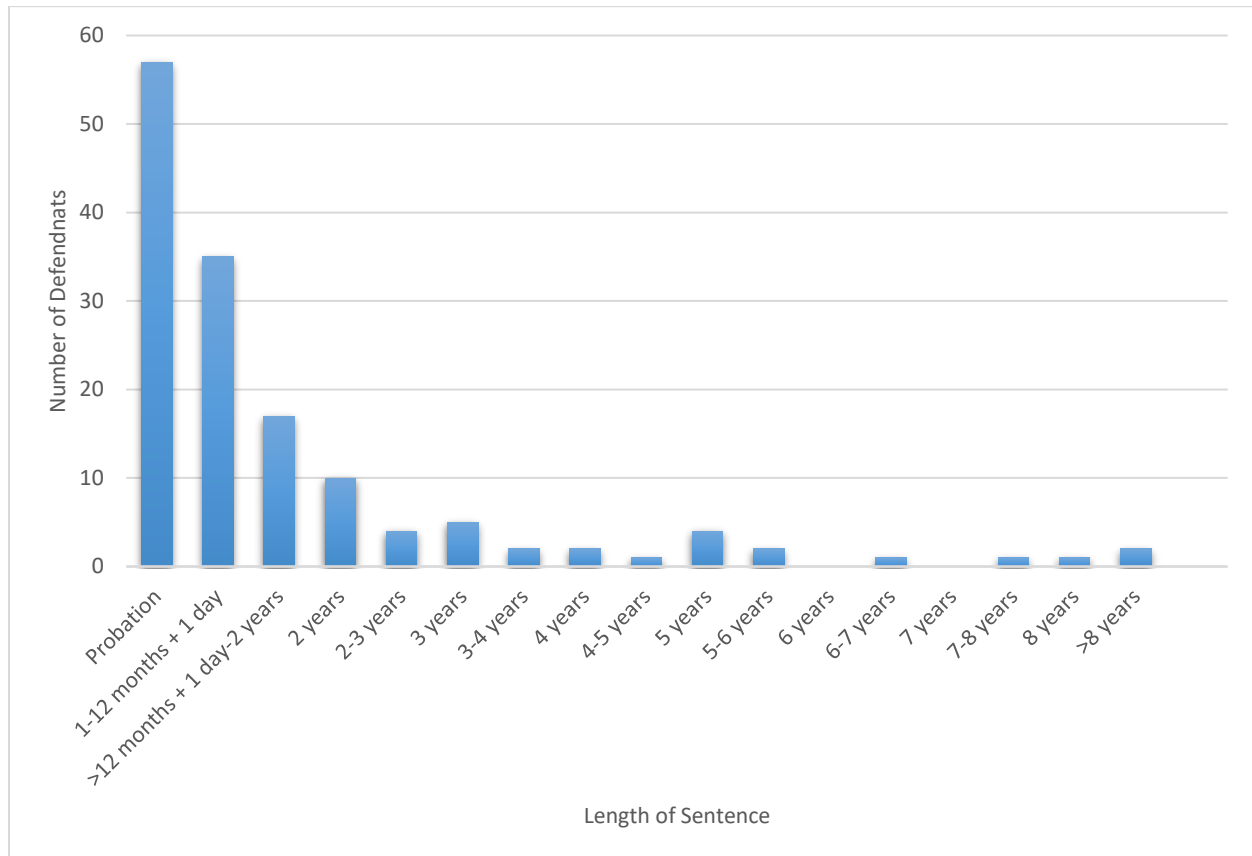
***United States v. Groves***, 5:12-cr-00043 (W.D. Ky. 2015)

- The defendant downloaded 31,000 files from his former employer to an external hard drive, some possessing trade secrets, and took them to a new job with a competitor.
- The defendant did not inform the FBI about the hard drive during interviews.
- The court found that the defendant intended to cause a monetary loss to his former employer by using the confidential documents.
- The defendant was sentenced to 24 months of probation and weekend incarceration for 25 consecutive weekends.

By comparison, Dr. Xue's conduct was far less egregious. Unlike the majority of these defendants whose criminal conduct involved direct harm to the victim, the Court here has found that Dr. Xue neither intended nor caused any harm to GSK. And given the nature of the documents that Dr. Xue did send from GSK— compared to the value of the documents that she had available to her and did not take—it is clear that Dr. Xue's conduct bears little resemblance to and is far less serious than the typical trade secrets case. And even in the "typical" trade secret case, courts around the country have typically departed far below the sentencing guidelines. This Court should not hesitate to do likewise.

Judges faced with more egregious facts frequently reject the government's push to impose a rigid Guidelines sentence. A review of all of the convictions for theft of trade secrets under 18 U.S.C. § 1832 since its enactment for which sentencing records were publicly available

—which includes 144 individuals, many of whom were also charged with other crimes—reveals that the vast majority received either probationary sentences or less than 12 months of confinement.<sup>15</sup>



In rejecting the guideline sentence as being too severe, the sentencing judges made the determination that strictly applying the loss guidelines would cause an injustice. By looking at the other § 3553(a) factors, the judges have used a more common-sense approach and imposed sentences involving either no or minimal incarceration. The same approach should be taken here: the Court should impose a non-custodial sentence with probation or home confinement.

In addition, Dr. Xue has been under court supervision for the past five years. During much of that time she was on electronic monitoring. Her travel is highly restricted, and she must

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<sup>15</sup> For a full list of the 144 individuals *see* Ex. F.

obtain Court permission anytime she leaves the district. That, too, has been, effectively, a punishment that should not go unacknowledged.

**E. The COVID-19 Pandemic Must Be Considered Before Imposing a Sentence**

Additionally, when determining the types of sentences available, the Court should consider the COVID-19 pandemic that has ravaged not just the nation, but, also, in particular, the prison system. Courts nationwide have already recognized the grave danger posed by COVID-19's risk to prisoners, noting that the risk "is significantly higher than in the community, both in terms of risk of transmission, exposure, and harm to individuals who become infected." *Basank v. Decker*, 449 F. Supp. 3d 205, 211 (S.D.N.Y. 2020); *see also United States v. Campagna*, 16-Cr. 78-01 (CGS), 2020 WL 1489829, at \*2 (S.D.N.Y. Mar. 27, 2020); *United States v. Garlock*, No. 18-cr-00418-VC-1, 2020 WL 1439980, at \*1 (N.D. Cal. Mar. 25, 2020). This Court is no doubt well-aware of widely-reported COVID-19 outbreaks at federal penitentiaries around the country.<sup>16</sup>

The impact of the pandemic on a potential inmate like Dr. Xue would be unavoidable. Dr. Xue would, like all federal inmates, have limited ability to protect herself from the virus because she would not be able to socially distance himself from other inmates and staff and personal protective equipment will always be in short supply in a federal penitentiary. As a result, the risk of Dr. Xue, who has high-blood pressure (a high-risk factor for COVID-19), contracting the virus is significant.

As a result of the threat of COVID-19 spreading in its institutions, the Bureau of Prisons has taken aggressive steps to help avoid the spread of the disease. While these preventive

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<sup>16</sup> See Kimberly Kindy, *Inside the deadliest federal prison, the seeping coronavirus creates fear and danger*, The Washington Post (Apr. 10, 2020) [https://www.washingtonpost.com/national/inside-the-deadliest-federal-prison-the-seeping-coronavirus-creates-fear-and-danger/2020/04/09/deeceb6e-75b4-11ea-a9bd-9f8b593300d0\\_story.html](https://www.washingtonpost.com/national/inside-the-deadliest-federal-prison-the-seeping-coronavirus-creates-fear-and-danger/2020/04/09/deeceb6e-75b4-11ea-a9bd-9f8b593300d0_story.html).

measures are understandable and can be at least moderately effective, the result is a draconian sentence for inmates committed to minimum security facilities compared to the “normal” minimum security experience.

If a period of incarceration is ordered, the Bureau of Prisons would almost certainly designate Dr. Xue as “low risk” given her lack of criminal history and the nature of her offense. As a result, she could expect to be designated to a minimum security facility. Typically, such facilities permit inmates to work, exercise, and move about with relative freedom, and family is permitted to visit weekly. However, this is no longer the case. New inmates to a facility are now forced to quarantine for 21 days, which essentially requires that the inmate be locked down 24 hours a day for three weeks, and no calls to family or visits are permitted. Nor are inmates permitted to leave their cells to recreate, and they are only allowed to shower twice per week. After the initial quarantine, movement is much more restricted and work opportunities are very limited, and most critically, family visits are prohibited indefinitely. Given the current spread of COVID-19 in society, it is highly unlikely that any family visits will be permitted until far into the future.

In sum, any period of incarceration that this Court imposes will be far more onerous than what would be typical for an inmate like Dr. Xue. This reality was recently recognized by the court in *United States v. Shi*, which, after considering all of the Section 3553 factors, ordered Dr. Shi released from prison early because of the onerous COVID-related restrictions imposed by the Bureau of Prisons:

“[T]he Court fashioned [its original, 16-month] sentence on the assumption that Dr. Shi would be designated to a minimum- (or at least low-) security facility, as has been the Court’s experience with similarly-situated defendants. Consistent with that assumption, BOP initially designated him to a minimum-security camp at FCI Three Rivers. The landscape looks far different now. . . . The unexpected

severity of Dr. Shi's prison experience has upset the careful balance the Court attempted to strike at sentencing: The harsh conditions do not fit his crime. . . . Requiring him to serve out the remaining months of his term is unnecessary to deter future potential offenders. Finally, alternatives to incarceration exist to achieve the purposes of the original sentence, namely, home confinement until the beginning of his term of supervised release."

Mem. Op. & Indicative Ruling at 10–11, *United States v. Shi*, No. 1:17-cr—00110 (CRC) (D.D.C. Sept. 14, 2020), ECF No. 380.

The rationale of the court in *Shi* applies here as well: viable alternatives to incarceration—such as home confinement—are available to the Court instead of a severe, potentially life-threatening sentence that would require three weeks of isolation and almost certainly no family visits for the duration of the sentence.

## **V. CONCLUSION**

Dr. Xue used grievously bad judgment when she sent GSK documents to Tao Li. She has been paying the price for this conduct since January 2016, and she will continue to pay the price for the rest of her life, regardless of the sentence the Court imposes. Unfortunately, it was not just herself that her conduct ultimately harmed; she also devastated her family. The guilt and shame of that is something that she cannot live down.

Fortunately, her conduct caused no actual harm to GSK. And her fledgling business, Renopharma, was a bust and never even utilized the pilfered documents.

Weighing these equities, and the remarkable and truly exemplary community service that Dr. Xue has embarked upon since her arrest, a non-custodial sentence in this case is fair and just. Such a sentence is no “slap on the wrist”: the life Dr. Xue knew prior to her arrest is over, forever. She is now a felon—a label that she will be forced to wear for the rest of her life. Her once-promising career is over. As a result of her conduct, her family's finances have been devastated. In the circumstances of this case, a non-custodial sentence is sufficient, and a

custodial sentence would be unnecessary, to satisfy the statutory purposes of sentencing. Such a sentence accomplishes the goals of sentencing set forth in 18 U.S.C. § 3553.

Dated: March 16, 2021

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

I HEREBY CERTIFY that on this 16th day of March 2021, I electronically filed the foregoing with the Clerk of the Court by using the CM/ECF system, which will send a notice of electronic filing to all counsel of record.

/s/ Peter Zeidenberg  
Peter Zeidenberg